

Input file T198sHVEM1; Output File T198sHVEM1.pat  
Sequence length 1929

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CAGCTTGTCACACCGAGGCGGATTCTCTTTCTCTTTCTCTTTCTCTTTCTGGCCCCACAGCCGACGAATGGCGCTGAGTT 237
CCTCTGTGCTGGAGTTCATCCTGTCTAGCTGGGTTCCCCGAGCTGCCGGTCTGAGCCTGAGGC M E P P G 5
ATG GAG CCT CCT GGA 311
D W G P P P W R S T P R T D V L R L V L 25
GAC TGG GGG CCT CCT CCC TGG AGA TCC ACC CCC AGA ACC GAC GTC TTG AGG CTG GTG CTG 371
Y L T F L G A P C Y A P A L P S C K E D 45
TAT CTC ACC TTC CTG GGA GCC CCC TGC TAC GCC CCA GCT CTG CCG TCC TGC AAG GAG GAC 431
E Y P V G S E C C P K C S P G Y R V K E 65
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A C G E L T G T V C E P C P P G T Y I A 85
GCC TGC GGG GAG CTG ACG GGC ACA GTG TGT GAA CCC TGC CCT CCA GGC ACC TAC ATT GCC 551
H L N G L S K C L Q C Q M C D P A M G L 105
CAC CTC AAT GGC CTA AGC AAG TGT CTG CAG TGC CAA ATG TGT GAC CCA GCC ATG GGC CTG 611
R A S R N C S R T E N A V C G C S P G H 125
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F C I V Q D G D H C A A C R A Y A T S S 145
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Figure 1

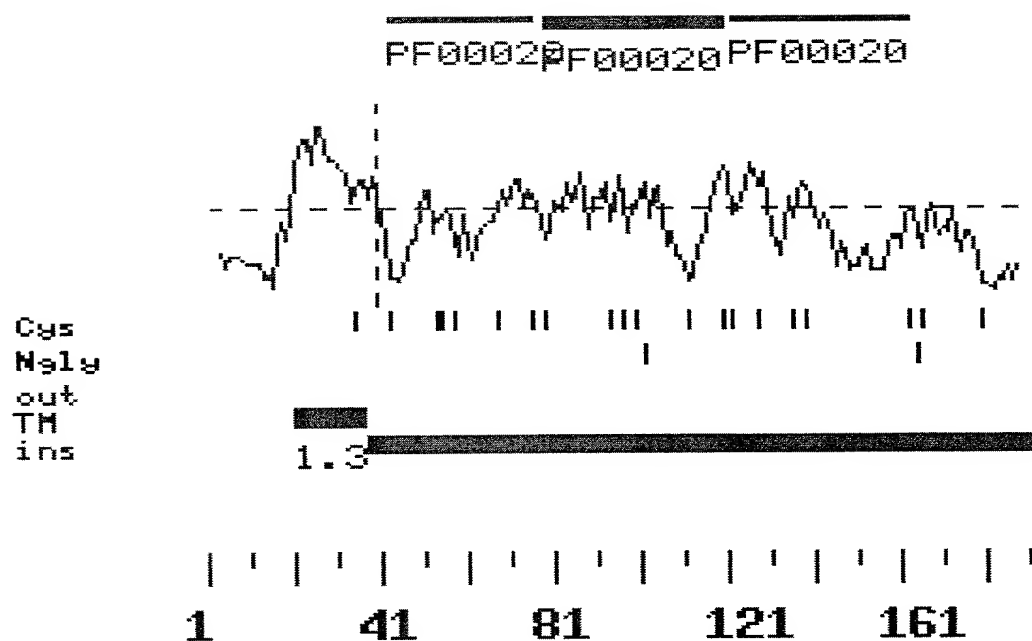
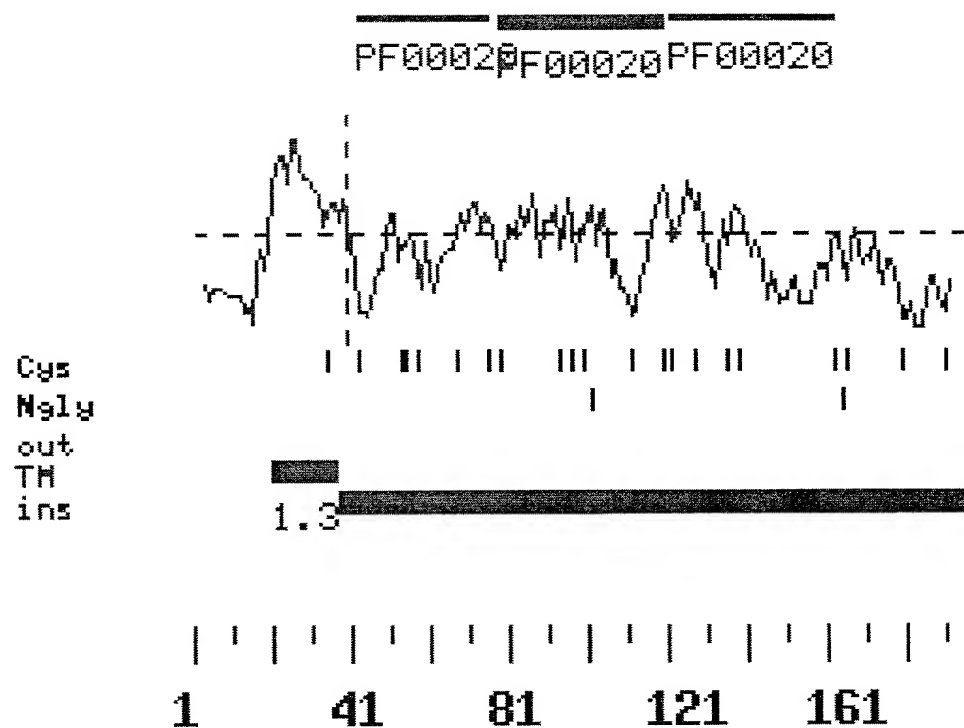


Figure 2





*Figure 4*

Input file sHVEM3; Output File sHVEM3.pat  
Sequence length 2313

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GAC GTC TCG AGG CTG GTG CTG TAT CTC ACC TTC CTG GGA GCC CCC TGC TAC GCC CCA GCT      198

      L   P   S   C   K   E   D   E   Y   P   V   G   S   E   C   C   P   K   C   S      58
CTG CCG TCC TGC AAG GAG GAC GAG TAC CCA GTG GGC TCC GAG TGC TGC CCC AAG TGC AGT      258

      P   G   Y   R   V   K   E   A   C   G   E   L   T   G   T   V   C   E   P   C      78
CCA GGT TAT CGT GTG AAG GAG GCC TGC GGG GAG CTG ACG GGC ACA GTG TGT GAA CCC TGC      318

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CCT CCA GGC ACC TAC ATT GCC CAC CTC AAT GGC CTA AGC AAG TGT CTG CAG TGC CAA ATG      378

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      R   A   Y   A   T   S   S   P   G   Q   R   V   Q   K   G   G   T   E   S   Q      158
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      C   Q   H   Q   T   K   K   A   *
TGT CAG CAC CAG ACC AAA AAG GCT TGA      187
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GGGCCCCTAACCTGACCTGAGACTTCAGAGCTTCTTGGGAGGAGCTGGGGTCCCCCAGCGGAGCCTGGGATGGAGCAGGG 1040
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Figure 5

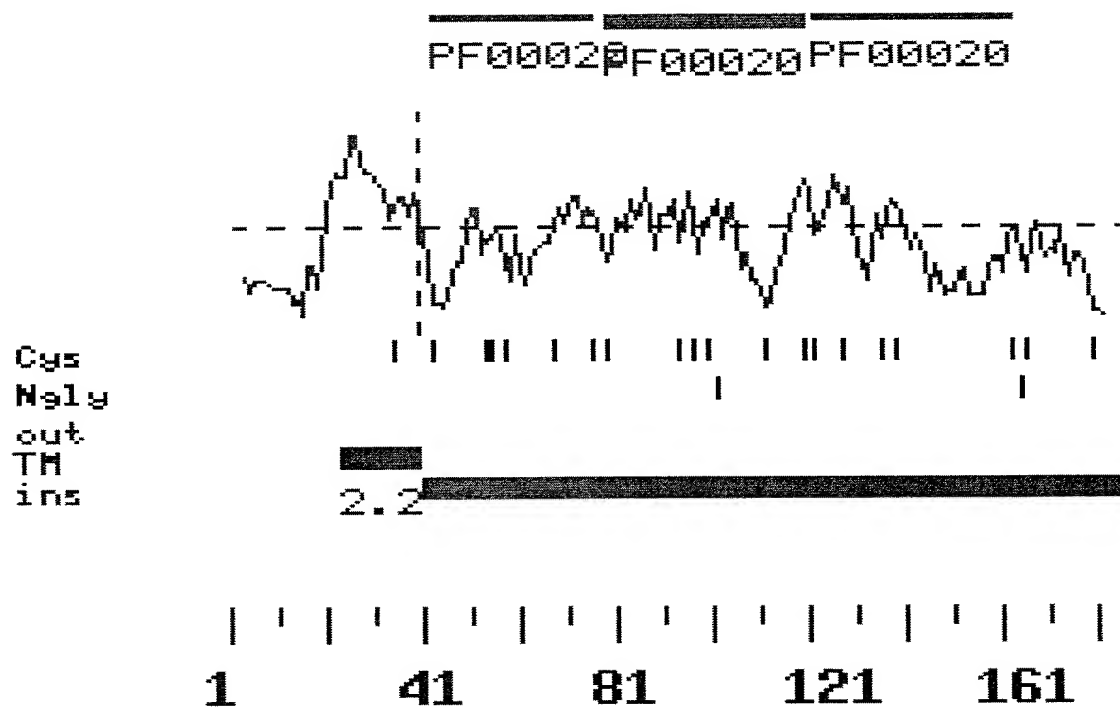


Figure 6

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Y A P A L P S C K E D E Y P V G S E C C	54
TAC GCC CCA GCT CTG CCG TCC TGC AAG GAG GAC GAG TAC CCA GTG GGC TCC GAG TGC TGC	264
P K C S P G Y R V K E A C G E L T G T V	74
CCC AAG TGC AGT CCA GGT TAT CGT GTG AAG GAG GCC TGC GGG GAG CTG ACG GGC ACA GTG	324
C E P C P P G T Y I A H L N G L S K C L	94
TGT GAA CCC TGC CCT CCA GGC ACC TAC ATT GCC CAC CTC AAT GGC CTA AGC AAG TGT CTG	384
Q C Q M C D P A M G L R A S R N C S R T	114
CAG TGC CAA ATG TGT GAC CCA GCC ATG GGC CTG CGC GCG AGC CGG AAC TGC TCC AGG ACA	444
E N A V C G C S P G H F C I V Q D G D H	134
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C A A C R A Y A T S S P G Q R V Q K G G	154
TGC GCC GCG TGC CGC GCT TAC GCC ACC TCC AGC CCG GGC CAG AGG GTG CAG AAG GGA GGC	564
T E S Q D T L C Q N C P P G T F S P N G	174
ACC GAG AGT CAG GAC ACC CTG TGT CAG AAC TGC CCC CCG GGG ACC TTC TCT CCC AAT GGG	624
T L E E C Q H Q T K C S W L V T K A G A	194
ACC CTG GAG GAA TGT CAG CAC CAG ACC AAG TGC AGC TGG CTG GTG ACG AAG GCC GGA GCT	684
G T S S S H W V W W F L S G S L V I V I	214
GGG ACC AGC AGC TCC CAC TGG GTA TGG TGG TTT CTC TCA GGG AGC CTC GTC ATC GTC ATT	744
V C S T V G L I I C V K R R K P R G D V	234
GTT TGC TCC ACA GTT GGC CTA ATC ATA TGT GTG AAA AGA AGA AAG CCA AGG GGT GAT GTA	804
V K V I V S V Q V L I L L P L S L P P P	254
GTC AAG GTG ATC GTC TCC GTC CAG GTA TTG ATC CTC CTC CCC CTC TCC CTC CCC CCT CCA	864
P S H L P S P R W G W C F W C T W W G L	274
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P V L *	278
CCA GTT CTC TGA	936
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Figure 7

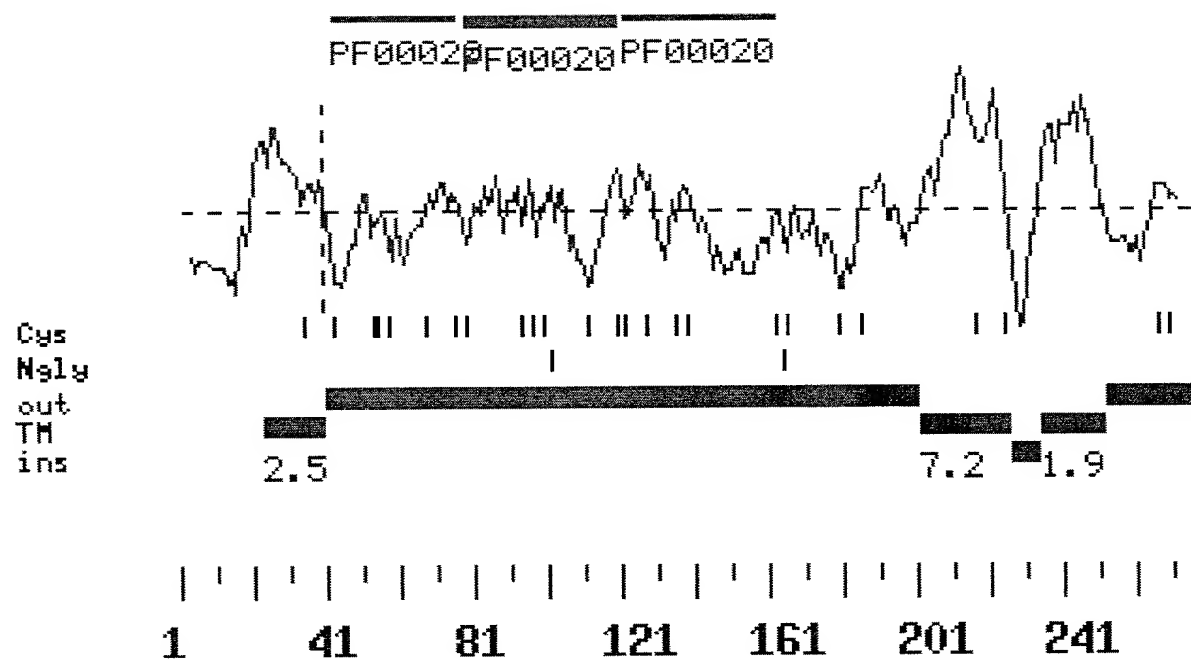


Figure 8







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**Figure 9C**

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sHVE_M_3_n.a.	AAGTGATTTTCTAAATTGGATTGTAATTCGGCTCCTGTTTCTATTTGTATGAAACAGTGTATTTGGGGAGATGCTGTG	
mHVE_M_2_n.a.	AAGTGATTTTCTAAATTGGATTGTAATTCGGCTCCTGTTTCTATTTGTATGAAACAGTGTATTTGGGGAGATGCTGTG	
mHVE_M__pub.__n.a.	AAGTGATTTTCTAAATTGGATTGTAATTCGGCTCCTGTTTCTATTTGTATGAAACAGTGTATTTGGGGAGATGCTGTG	
	2801	2880
sHVE_M_1_n.a.	GGAGGATGTAAATATCTTGTCTCCTCAA----	
sHVE_M_2_n.a.	GGAGGATGTAAATATCTTGTCTCCTCAA----	
sHVE_M_3_n.a.	GGAGGATGTAAATATCTTGTCTCCTCAA----	
mHVE_M_2_n.a.	GGAGGATGTAAATATCTTGTCTCCTCAA----	
mHVE_M__pub.__n.a.	GGAGGATGTAAATATCTTGTCTCCTCAA----	
	2881	2904
sHVE_M_1_n.a.	-----	
sHVE_M_2_n.a.	-----	
sHVE_M_3_n.a.	-----GGGCGGCCGC	
mHVE_M_2_n.a.	AAAAAAAAAAAAAGGGCGGCCGC	
mHVE_M__pub.__n.a.	-----	

**Figure 9D**

	1	80
shVEM_1_a.a.	MEPPGDWGGPPPWRSTPRTDVLRLVLVLTFLGAPCYAPALPSCKEDEYYPVGSECCPKCSPGYRVKEACGELTGTVCEPCPP	
shVEM_2_a.a.	MEPPGDWGGPPPWRSTPRTDVLRLVLVLTFLGAPCYAPALPSCKEDEYYPVGSECCPKCSPGYRVKEACGELTGTVCEPCPP	
shVEM_3_a.a.	MEPPGDWGGPPPWRSTPRTDVSRLVLVLTFLGAPCYAPALPSCKEDEYYPVGSECCPKCSPGYRVKEACGELTGTVCEPCPP	
mHVEM_2_a.a.	MEPPGDWGGPPPWRSTPRTDVLRLVLVLTFLGAPCYAPALPSCKEDEYYPVGSECCPKCSPGYRVKEACGELTGTVCEPCPP	
mHVEM__pub.__a.a.	MEPPGDWGGPPPWRSTPRTDVLRLVLVLTFLGAPCYAPALPSCKEDEYYPVGSECCPKCSPGYRVKEACGELTGTVCEPCPP	
	81	160
shVEM_1_a.a.	GTYYIAHLNGLSKCLQCQMCDPAMGLRASRNCSTRTEAVCGCSPGHFCIVQDGDHCAACRAYATSSPGQRVQKGGTESQDT	
shVEM_2_a.a.	GTYYIAHLNGLSKCLQCQMCDPAMGLRASRNCSTRTEAVCGCSPGHFCIVQDGDHCAACRAYATSSPGQRVQKGGTESQDT	
shVEM_3_a.a.	GTYYIAHLNGLSKCLQCQMCDPAMGLRASRNCSTRTEAVCGCSPGHFCIVQDGDHCAACRAYATSSPGQRVQKGGTESQDT	
mHVEM_2_a.a.	GTYYIAHLNGLSKCLQCQMCDPAMGLRASRNCSTRTEAVCGCSPGHFCIVQDGDHCAACRAYATSSPGQRVQKGGTESQDT	
mHVEM__pub.__a.a.	GTYYIAHLNGLSKCLQCQMCDPAMGLRASRNCSTRTEAVCGCSPGHFCIVQDGDHCAACRAYATSSPGQRVQKGGTESQDT	
	161	240
shVEM_1_a.a.	LCQNCPPGTFSPNGTLEECQHQTNRWKSQTDL-----	
shVEM_2_a.a.	LCQNCPPGTFSPNGTLEECQHQTNPWPNHMEKKKAG-----	
shVEM_3_a.a.	LCQNCPPGTFSPNGTLEECQHQTTKA-----	
mHVEM_2_a.a.	LCQNCPPGTFSPNGTLEECQHQTCSWLVTKAGAGTSSSHWVWVFLSGSLVIVIVCSTVGLIICVKRRKPRGDVVKVIVS	
mHVEM__pub.__a.a.	LCQNCPPGTFSPNGTLEECQHQTCSWLVTKAGAGTSSSHWVWVFLSGSLVIVIVCSTVGLIICVKRRKPRGDVVKVIVS	
	241	283
shVEM_1_a.a.	-----	
shVEM_2_a.a.	-----	
shVEM_3_a.a.	-----	
mHVEM_2_a.a.	VQVLILLPLSLPPPPSHLPSRWGWCFWCTWWGLPVL-----	
mHVEM__pub.__a.a.	VQRRKQEAEGEATVIEALQAPPDVTTVAVEETIPSFTRSPNH	

**Figure 10**